ARCHITECTURE

VOL. VI. NOVEMBER 15, 1902. No. 35.

ARCHITECTURE, edited by A. HOLLAND FORBES, is published the fifteenth of every month by FORBES & COMPANY, LTD., 160 Fifth Avenue, New York. Its opinions on technical subjects are either prepared or revised by specialists.

PRICE, mailed flat to any address in the United States or Canada, $4.00 per annum, in advance; to any foreign address, $5.00 per annum in advance.

ADVERTISING RATES upon request. The writing and displaying of advertisements is an art in itself, and the publishers will be pleased to give the Advertiser the benefit of an Expert's experience in this line at no additional expense.

THE CONSULTING BOARD OF ARCHITECTURE is composed of five prominent architects and meets monthly. All manuscript, photographs and drawings are passed upon by this Board.

THE PUBLISHERS regret that owing to the demand the supply of back copies of ARCHITECTURE is limited. Prices will be quoted on application. The regular price of each number is 35c.

ENTERED at the New York Post Office as second-class mail matter.

PLATES AND ILLUSTRATIONS.

THE ARCHITECTURAL LEAGUE OF NEW YORK.

H. J. HARDENBERGH, President.

WM. L. HARRIS, 1st Vice-President.

R. HINTON PERRY, 2nd Vice-President.

215 West Fifty-seventh Street.

FRANK E. WALLIS, Secretary.

EDW. PEARCE CASEY, Treasurer.

THE committee on current work of The Architectural League, has divided the year's work in such a manner that meetings at which subjects of contemporary interest are to be discussed will alternate with meetings of a purely business nature.

The October meeting having been devoted to business, the year was auspiciously opened at the November meeting on the fifth instant, with a discussion of "The Present Status of Church Building and Decoration," in which a large number of both members and guests participated.

Special arrangements had been made for this meeting by the committee on church building and decoration, of which Mr. William Laurel Harris is chairman, and through their efforts a considerable collection of photographs and drawings of modern ecclesiastical work had been procured which were first exhibited on the night of this meeting.

The collection is very comprehensive and includes contributions received through the Royal Institute of British Architects, the Church Crafts League and the Clergy, and Artists' Society of England, while the continent of Europe is represented through the efforts of the French Society l'Art Sacre and the Benedictines of Beuron.

It is the intention of the committee to include this collection among the works which will be sent for exhibition to the various architectural societies comprising the circuit of the Architectural League of America.

Some sixty members and guests attended the dinner preceding the discussion and the rooms were thus comfortably filled. President Hardenbergh presided and among the guests seated around him were John La Farge, Mgr. Mooney, representing Archbishop Farley, Rev. S. P. McConnell of All Souls' Church, Father Cullen, of the Paulist Fathers, Montgomery Schuyler, Professor Ware of Columbia, and Samuel P. Avery.

The discussion was opened on behalf of the commiitee by Mr. George L. Heins, the State Architect, who read a number of letters of encouragement from prominent ecclesiastics throughout the country, but from whose words it was evident that the writers considered that religious art found little inspiration in the present age.

Mr. Heins was followed by Mr. John La Farge, Mgr. Mooney, Mr. C. C. Haight, Father Cullen, Professor Ware and Montgomery Schuyler.

EXHIBITION CATALOGUE ADVERTISING.

AN article recently published in a building trade paper agitated the question as to whether architectural societies generally are acting in a purely professional way in allowing the use of the society's and its members' names in securing advertisements for insertion in the said society's annual exhibition catalogue.

It is represented that even where advertisements are asked for in the least offensive way, that the firms approached very generally feel that the proceeding is a polite form of blackmail on the part of

REGISTRATION BUREAU FOR DRAUGHTSMEN.

This bureau is established for the use of architects wanting draughtsmen and draughtsmen wanting positions, free of expense to either party.

All draughtsmen wishing positions may register by answering the following questions:

Name and address?
Age?
Married or single?
Experience?
Name and address of last employer?
Salary expected?
References?

All architects wishing draughtsmen are invited to use this bureau.

the advertising agent who is of course acting under instructions, or in other words, that although the paw is velvety the claws are still there. With these partly concealed claws before their eyes, it is said that the firms approached are often made to feel that if they do not advertise there may be danger of incurring some damage in a business way. In other words, that the architectural societies, through their members, will practice some form of boycott on the reluctant firms, or that individual officers will from resentment cease to employ, contract with or buy of the non-advertiser.

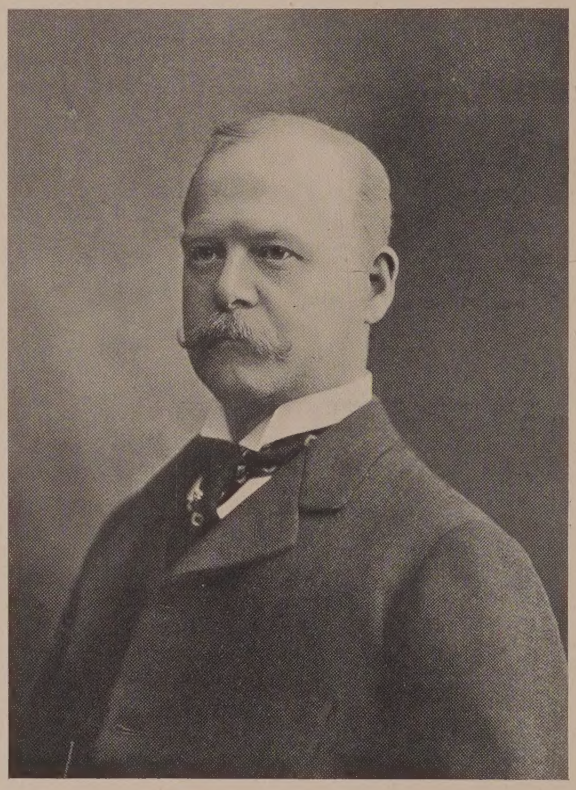
It must be confessed that there is some likelihood that such a course of reasoning is often indulged in by some business men, and no one is more wide awake to the imperfection of the present system of partially supporting exhibitions by advertising in a catalogue than the leading architectural societies of to-day. The Chicago exhibition is supported by contributions with no advertising matter in the catalogue. Are these entirely voluntary contributions in the full sense of the word? We can hardly believe it, although the fact would seem at first to be a solution of the question. The New York, Philadelphia and Boston catalogues contain advertisements. It is a very interesting question and one often discussed by architects whether it is right to even suggest that an advertisement be given to help carry on the annual exhibition which all these societies hold.

Let us look at the question on the side of the architects.

In societies and as individuals the best architects concede that if there is any better way to conduct these exhibitions, they wish to learn and follow it. No one can doubt this who has ever served on the executive committee of an architects' or artists' society.

Architects believe that the exhibitions are helping all the allied crafts and arts financially even more than they are helping architecture and architects. Few architects, if any, make out of building operations anything like the proportional amount of money per man that business firms and contractors make. There are thousands of business firms, who are affected financially by building operations, who never come into business relations with an architect. Yet all these men are making money out of the improved architectural conditions brought about by the great architectural salons.

Do architects really ask possible advertisers to contribute unduly to the great exhibitions? Is there any class of business man who weekly gives up so much unpaid time to the work of mutual improvement societies as do the architects of to-day? From a former apathy as to matters architectural the public in America is now one of the most keenly critical and appreciative in the world. Only the French surpass Americans in their determination to get the best designs out of native designers. What does this mean? It means that where a man formerly would not bother to ask for or pay for a well-studied design for his house, office building, theatre, garden, stable or factory, to-day he insists on the best results and pays for them. Whom does he pay? The architect, five per cent. on new work, ten per cent. on alterations, and the balance to the contractor and sub-contractor. Is there any question as to who gets the lion's share?



Architects of To-Day—XII.

MR. GEORGE KRAMER THOMPSON.

We have been dealing with the sordid financial side; but take the moral side: Is not the more prosperous business man even more than the architect bound to assist in the moral advancement of the community by the constant illustration of good designs as selected by the impartial, unpaid and intelligent juries of the various societies? We claim that good architecture, sculpture and painting are among the most potent moral forces of civilization, and that not only business men, but all classes and even the state government should assist these exhibitions.

Do architects in getting advertising matter really ask for something and give nothing or little in return? Take the catalogues of the large societies. They are issued in not large numbers to be sure, but they run up into the thousands; they are filed by architects and put with *all the advertisements still in them*, on the shelves of the best public libraries, and are laid by buyers on the tables of the well-to-do where people of means see them. Did you ever see one in a second-hand book store? If so it always brought a fair price, did it not?

The business man wishes to deal, we believe, with the best class of architects. Did you ever hear of a case where a man was boycotted by an architect, sculptor or painter because he did not advertise in a society catalogue? We never did, and the society is degenerate that will not gladly help dispose of such a member.

The above of course deals with the more carefully conducted society catalogues. The trouble is that to-day, many firms do not stop to distinguish what is a legitimate publication and what a mere leech. When an individual writes a letter asking contractors to pay for advertisements in his private book of self-chosen designs, he is asking for money for his own pocket from men who properly are indignant, but often comply with the request. But when a society asks for advertisements to a properly conducted exhibition where designs must run the gauntlet not only of a jury of selection and of the general public eye and tongue, it is a request, a begging if you please, but a noble one, a begging *for* help *to* help the public taste and to raise the public standard, to improve our cities, our countryside, our streets, our river banks, and so to raise us a little further out of the miry rut of commercialism. Our college presidents do the same kind of begging.


GOLF LINKS
DEAL
Main House
Drive
Bridge
Vegetable Garden
"KILDYSART"
PREMISES of DANIEL O'DAY ESQ.
at
DEAL N.J.
Scale
George Kramer Thompson
ARCHITECT
66 Broadway, New York City

REAR VIEW, "KILDYSART," COUNTRY HOUSE, DANIEL O'DAY, DEAL, N. J.
George Kramer Thompson, Architect. Wurts, Photo.

THE COUNTRY SEAT OF DANIEL O'DAY, DEAL, N. J.

THE premises of Daniel O'Day, his country seat at Deal, N. J., on Deal Lake, contains about twenty-five acres of ground, the development of which is nearing completion. The landscape work is probably more extensive than any piece of work of this nature on the Jersey coast. The style of architecture is Elizabethian, being built of the most substantial and lasting materials.

The main house is about two hundred feet long and arranged in such a way that the larger portion of it can be shut off during the winter season, and the portion nearest the lake, called the annex, is so arranged that it is a house in itself.

One of the strong features of the interior is the great hall, extending three stories in height with a continuous gallery about the second and third stories, from which the suits of bedrooms are approached. In this hall is a Caen stone mantle with life-size figures on the chimney breast which group represents the union of the ocean and the lake.

The first story contains the great hall, reception room, music room, main dining room, annex dining room, breakfast room, library, children's parlor, billiard and lounging room ; and in the annex is a separate kitchen, butler's pantry, etc., for winter use, the main kitchen, pantries, etc., being in the main portion of the building. There is a complete gymnasium on the third story. The object of the tower is two-fold ; that of being used as an observatory and for water pressure tanks.

The grades and undulations of the ground were found by Mr. G. K. Thompson, the architect, to be of such a nature that an economical use of material for grading necessitated the adoption of one of the most attractive features of the place—namely a sunken garden which commences at the greenhouses and is stepped down at various points until at the lake it reaches the level of the aquatic garden. Spanning this sunken portion of the grounds is a most substantial brick and terra cotta bridge one hundred and fifty feet long, over which the main avenue to the house passes.

A bridle path of about one and one-half miles winds through the various portions of the grounds.

The stables are quite extensive and contain all of the latest improvements. These, with the gardener's cottage, gate lodge, graperies and boat house complete the out-buildings.

ADVICE TO STUDENTS.

JOHN SLATER, B. A.

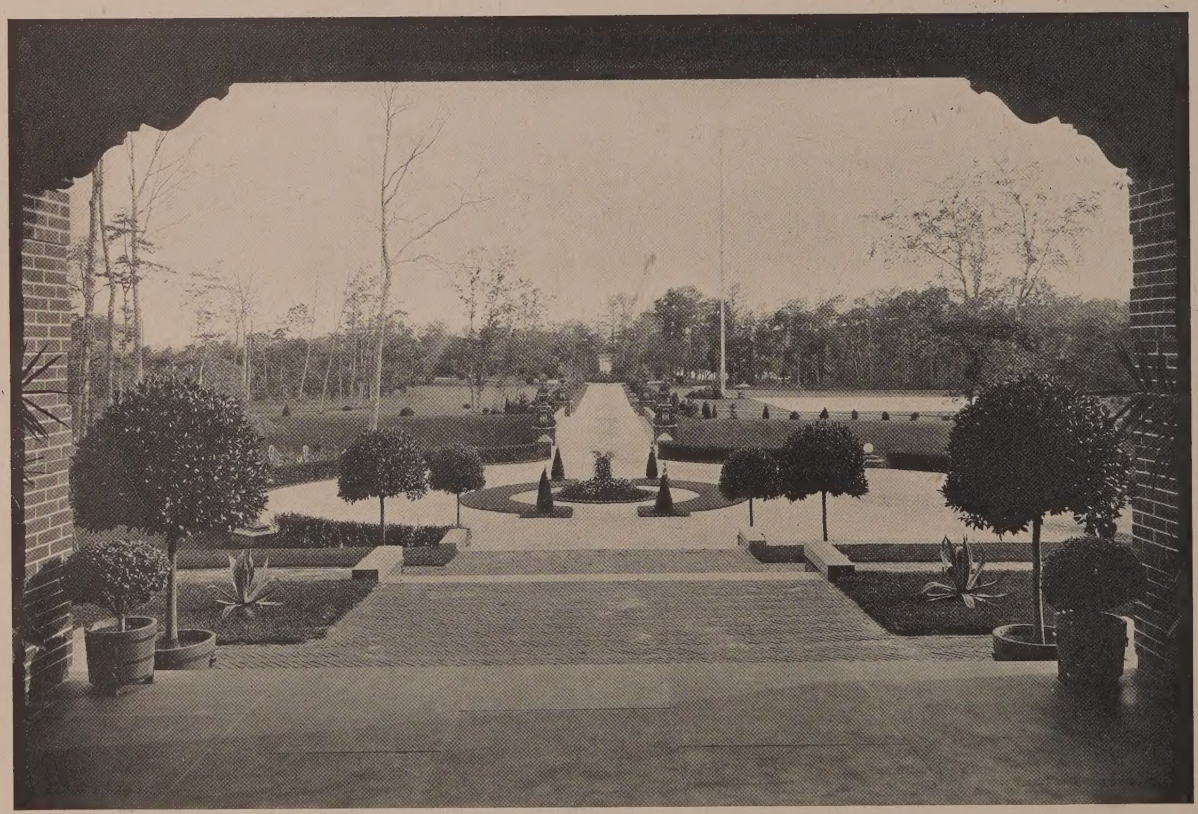
THE buildings which have attracted and which will attract the most universal admiration are not those at the sight of which we exclaim "How enormous !" or "How wonderfully clever !" but those which are beautiful; and whenever you meet with a building, large or small, new or old, which attracts you as being beautiful, study it carefully, not in the mechanical spirit of the anatomist who is dissecting a dead body, but with wise and loving sympathy and reverent tenderness. I am old-fashioned enough to think that an architect ought to try to make his building beautiful, and that a protest should be made against what appears to me to be the cult of ugliness which has been growing of late years. There is too great a tendency nowadays to mere eccentricity and originality among the younger men. There have been several buildings erected lately, the cleverness—I had almost said the infernal cleverness—of which cannot be denied for one moment. But are they beautiful ? There is far

too much straining after effect, too great eagerness to achieve something not attempted, or at any rate not achieved before; and, as has been well said, "when the achievement becomes obvious, is it not by way of becoming uninteresting?" I am not arguing in favor of a dead level of monotony which is uninteresting, even if the level be a high one. I have no love for the stereotyped style of art which the Continental methods of education and study too often result in. If a man be a true artist his individual emotions, the bent of his mind, all the idiosyncrasies of his character, are bound to come out in his work; but do not let your main idea and aim be to display your idiosyncrasies. The desire to be original is a constant besetment of the young artist; but unless founded on a solid basis of knowledge and study it is apt to lead to mere eccentricity, and to show a desire to astonish rather than to command that legitimate admiration which sensible people would give to all well-considered and thoughtful work; and there is perhaps nothing more distressing to the intelligent observer of a work of art than an evidence of the desire to be original at all costs, where there is neither genius nor knowledge to support it. A real genius may be original because he has the knowledge and the power to work out his original ideas; but what can be more contemptible than to see the weak jejune and spiritless attempts to copy what may be admired as an original work of genius, while the copy only shows the lack of genius in its exponent? Your buildings are the vernacular in which you have to express the architectural ideas which are in you, and, depend upon it, the simpler and more direct that language is, the more eloquently will it appeal to the world. Be assured, therefore, that the time you may spend in studying old work will never be wasted—that such study will but brace your pinions and fit you better to soar into the heights which science is opening out for you. And, further, the study of old work will teach you another most important lesson—never to lose sight of the nature of the material in which you are working. In the best old work the material is never tortured: one form of ornamentation and enrichment is suitable for stone, another for brick, and another for wood; and this has always been lost sight of when art became debased, with the result that a mere *tour de force* is attained from which, however much we may admire the skill which produced it, we turn with relief to the simpler, truer, and more legitimate modes of treatment.

The field of an architect's practice is ever widening, and, in fact, it is now so extensive as almost to deter men from entering on it. All the new discoveries of science, which at first are simply laboratory experiments, are gradually made to subserve our daily needs and requirements, and as soon as this has taken place our clients expect us to advise them with reference to all new inventions, and you will find it to your great advantage to keep *au courant* with the times by noting—and, if possible, investigating—the utility of new inventions affecting architecture.

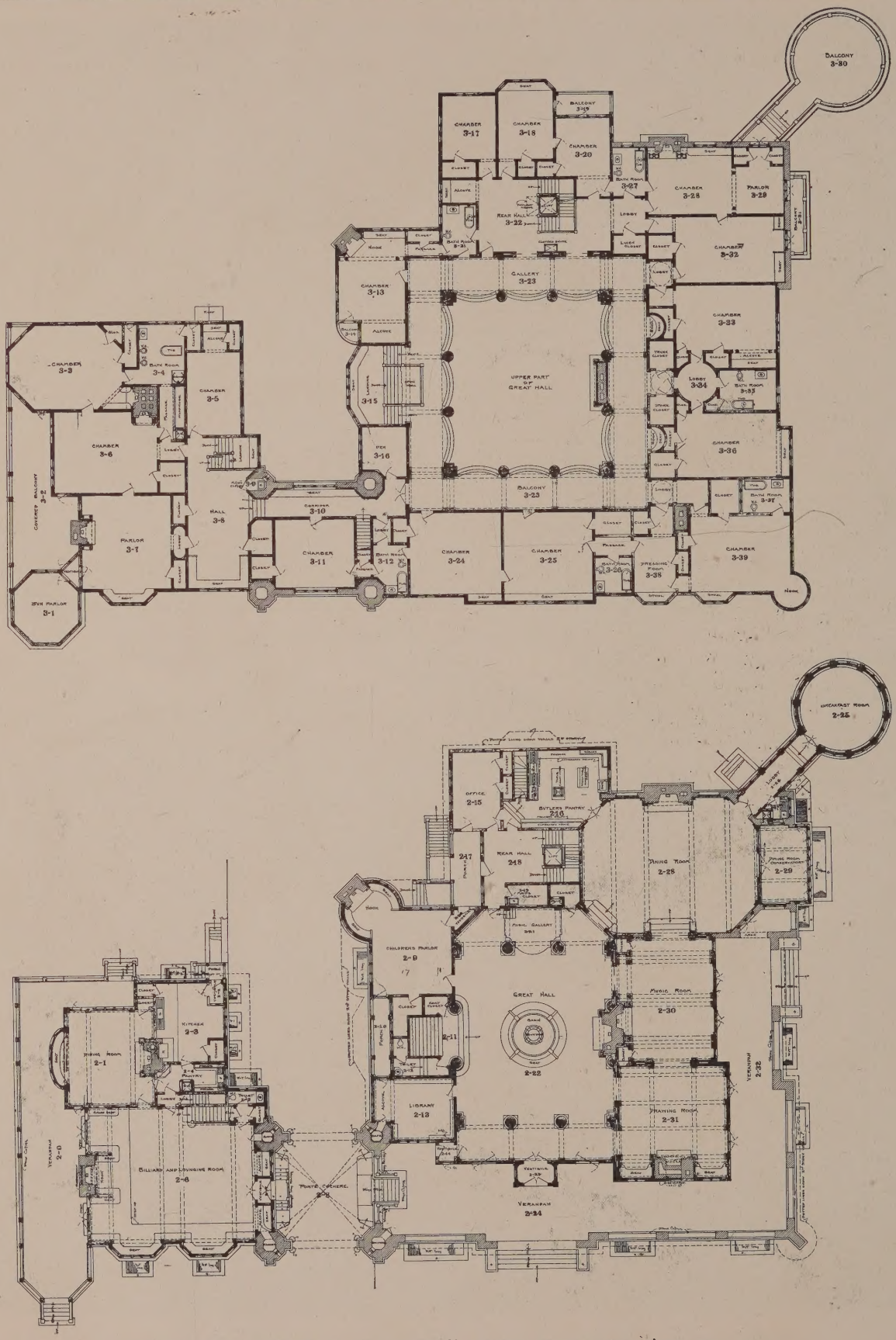
As your practice increases you need never be haunted by the dread of monotony. Your work will probably take you afield into various parts of the country, and every fresh building which you have to design will present new difficulties as to site, aspect,

TERRACE FRONT, "KILDYSART," COUNTRY HOUSE, DANIEL O DAY, DEAL, N. J.
George Kramer Thompson, Architect. Wurts, Photo, Copyright, 1902.

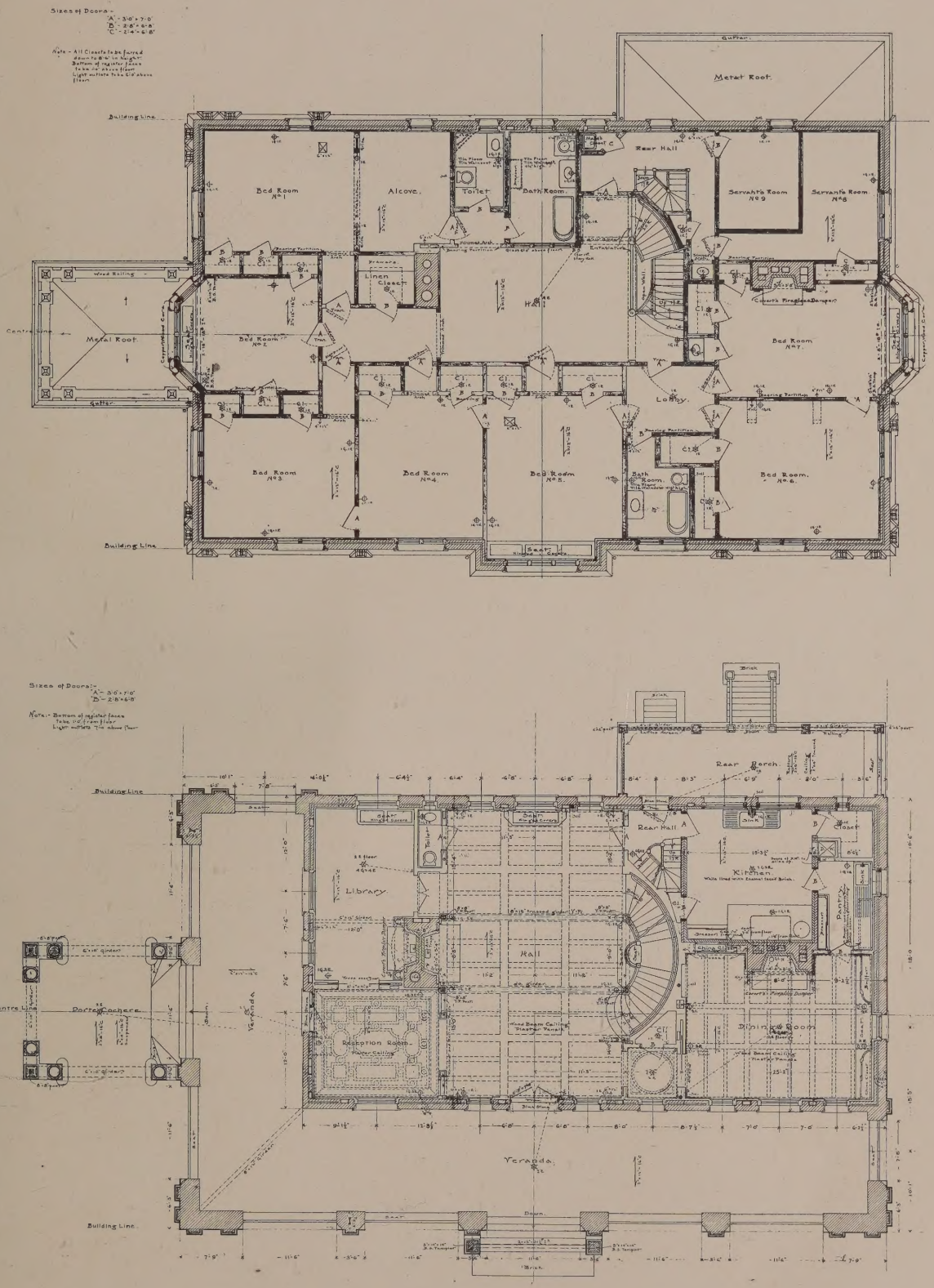


VIEW FROM PORCH AND THE SUNKEN GARDEN, "KILDYSART," COUNTRY HOUSE, DANIEL O'DAY, DEAL, N. J.
George Kramer Thompson, Architect. Wurts, Photo.

MUSIC AND BILLIARD ROOMS, "KILDYSART," COUNTRY HOUSE, DANIEL O'DAY, DEAL, N. J.
George Kramer Thompson, Architect. Wurts, Photo, Copyright, 1902.



FIRST AND SECOND STORY PLANS, "KILDYSART," COUNTRY HOUSE, DANIEL O'DAY, DEAL, N. J.
George Kramer Thompson, Architect.



FIRST AND SECOND STORY PLANS, RESIDENCE, PETER FISHER, ALLENHURST, N. J.
George Kramer Thompson, Architect.

VIEW IN GARDEN, COUNTRY HOUSE, GIRAUD FOSTER, LENOX, MASS. Carrere & Hastings, Architects. Marr, Photo, Aug., 1902.

accommodation, etc., which it is a never-ending pleasure to overcome. Architecture is so many-faceted, and touches so many planes of modern life—ecclesiastical, municipal, commercial, and social—that an architect ought above all other men to be broad-minded and to avoid anything like cliqueism or a haughty bearing toward his fellows. Remember that, however fascinating and lofty may be your designs, the effect of your buildings when finished depends not upon yourself, but upon the builder who carries out your designs, the foreman who looks after the work, and even the individual carpenter who fits a moulding, or the laborer who mixes the concrete, and if you cultivate broad sympathies you will find all through your life that you will remain a student, and will be learning lessons every day, and this will tend to keep your brain clear and your mind receptive.

COMMERCIALISM IN ART.

C. M. MORRIS.

EVER since art has been worked on a commercial basis, the conflict between What is best? and What is the cheapest or most expedient? has been waged in the architect's mind. Ruskin has very truly said: "So with all other brave and rightly-trained men. Their work is first, their fee second—very important always, but still second. And with some people just as certainly the fee is first and the work second. It is the whole distinction in a man—distinction between life and death in him. You cannot serve two masters; you must serve one or the other." The quotation applies with more or less directness to all work and art. Is the professional architect to serve art in its true meaning, or commercial interests and his own success? Few in the profession would be found to refuse to undertake the design and supervision of a building that cannot be honestly executed for a given sum. By paring down all that was good and essential to the design, by cutting down cost, by stinting material and labor, the architect actually commits the same offence against the above dictum as the architect who puts his fee before his work. By striving to obtain the commission for a building that he knows cannot be honestly executed, the professional man is trying to serve two masters, and his work must be more or less a failure. No man can value his art if he allows it to be bargained for at the lowest figure, and that is really what all bidding amounts to when conducted on the usual plan, with the architect and employer both unwilling to reduce the pretensions of the design, if they can get all that it represents for the sake of saving a few dollars on the cost. This is putting the fee or remuneration in the first place. The architect's practice as carried on is largely one of getting as many commissions as he can, of placing his remuneration before any other consideration. He is certainly not obliged to act in this manner. When an employer comes to him to design a given building, for a stated sum, he has the whole problem on

his hands. He can cut his plans according to the means at disposal, and he can correct his client's anticipations by informing him that certain things are impossible, that the areas of given rooms must be reduced. During the preparation of his plans he has opportunities for discussing with the client the question of the maximum space to be given to the rooms. He can modify his elevations. When the drawings are all finished the architect has still the power in his hands of assisting in the preparation of quantities, of advising as to the reasonableness of the bids, and advising his client upon the acceptance of any. We are afraid these counsels are not exercised as they should be. In the eagerness to get the work commenced, and to avoid other trouble in amending the plans, of "cutting down" items and features, the professional man does not urge, as he can and ought, the impossibility of accepting the lowest bid, which is often taken in spite of wiser counsels. The saving of several hundreds of dollars in the cost of the building is of itself looked upon as a gain rather than, as it generally turns out, a serious loss and misfortune. We say the architect at this critical juncture is often inclined to shirk his responsibility as an adviser, and to ignore his better judgment. Perhaps he does not like to offend a committee or a good client by recommending a higher bid. Or the work may be abandoned, and this would mean the loss of the commission.

Be this as it may, the architect's duty is to exercise his judgment, to protest against the acceptance of a bid that would entail either loss or ruin to the builder, or injustice to himself or his design, by a complete giving away and subordination of his art. We know that this independent stand is not made. The design is sacrificed—not the commission or the fee. It is this attitude of the profession in the matter of taking bids at the lowest price that we have to complain of. Instead of standing aside and allowing the lowest to be accepted without a protest, the architect would be furthering the cause of good building and workmanship by frankly advising his client. Not to do this very necessary part is to allow the impression to be formed that the architect is a party to the acceptance of the lowest bidder, and to the view of his profession that makes his art a very subsidiary part of the contract to build.

The cost of buildings is very often increased by the desire to make them more ornamental than their purpose demands—that is to say, by designing in too elaborate a key, with the necessary consequence of having to reduce the quality and substance of the work before the contract is signed. We all know the disastrous effects of this system of exhibiting artistic ability in the drawings, and sanctioning an inferior and spurious substitute in the building—a course which is practically a betrayal of art. Superfluous detail in the elevations and internal decoration of a large shop or hotel is inconsistent with the object of the structure. It is equally bad in the modern domestic dwelling, that ought to be quiet, and where expense incurred can be more usefully expended in providing superior

PERGOLA IN GARDEN, COUNTRY HOUSE, GIRAUD FOSTER, LENOX, MASS. Carrere & Hastings, Architects. Marr, Photo, Aug., 1902.

VIEW IN GARDEN, COUNTRY HOUSE, GIRAUD FOSTER, LENOX, MASS. Carrere & Hastings, Architects. Marr, Photo, Aug., 1902.

fittings and internal comfort, such as is afforded by substantial walls and floors, good joinery and thicker window-sashes. But probably the most serious indictment to be brought against extravagance in ornament in a building that has to be restricted in cost is the charge often made that the architect benefits by the increased cost to the extent of his commission on the outlay. We cannot expect architecture to be valued by the building client, if he entertains the idea that the architect is trying to make a large commission for himself. This is indeed placing the fee or the reward first and the work second. Unfortunately, the remuneration of the profession as now recognized rather gives favor to the notion that the commission is proportioned to the cost, and not to the actual skill of the designer. Competition has also decidedly helped to encourage the idea of placing the prize or reward before the work itself. Premiums are offered for designs on paper for buildings, not for the actual performance, which may be, and often is, a poor caricature of the design. The profession of all ranks compete for the prizes, but there is little guarantee of the actual work; the fee in this case comes before the task. In not a few instances it is draughtsmanship, not competence, that is rewarded, for we all know how the fee may be earned with the least trouble and expense to the architect. Again, the fact of competition being a sort of lottery has been inimical to the architectural skill employed. It is no guarantee of art in its best sense, in which the workman and his craft are concerned with the result. Art in its true and honest meaning is the co-operation of the architect and craftsman in producing the most thoughtful and conscientious result. Is not this one reason why we hear of the industrial crisis in building and other trades? The men engaged have no interest in their trades, and are instructed to do as little as they can for their wage. Here, also, it is the highest reward for the least effort. Indeed, the whole outcry that is now being raised has primarily to do with the disregard of the principle of puttinrg work before reward—or, in other words, of trying to do as little as possible, not of trying to do the best.

NEW APPLICATIONS OF OLD METHODS.

P. H. MORLEY.

THE century lately closed has added much to our store of methods and applications. When we see the number of inventions and new applications of old materials we possess—on our building appliances and mechanical aids to construction—we may be well astonished at the extent and value of them, and wonder how we should get on without them. Scientific discovery has been a great help to the builder. One wise man has told us there is "nothing new under the sun"—which is true, in a sense. The Ancient Egyptians, Greeks, and Romans knew as much as we do of the forces of nature, and could, from what we

PROGRAMME

For a Competition for the Memorial Continental Hall

TO BE ERECTED BY

The National Society Daughters of the American Revolution,

IN THE CITY OF WASHINGTON, DISTRICT OF COLUMBIA.

In accordance with the authority given by the National Society Daughters of the American Revolution, during Annual Congresses, held at Washington, D. C., Saturday, February 25th, 1899, and Saturday, February 23d, 1901, the following Competition is announced by the Committee on Architecture, a Sub-Committee of the Continental Hall Committee.

THE BUILDING.

The plans shall be for a fire-proof structure to cost $300,000.00.

ELIGIBLE COMPETITORS.

The competition shall be limited to those who are invited or introduced to the Committee on Architecture by members of the Society.

FORM OF COMPETITION.

Two competitions will be held—an Informal or Sketch Competition (of which this is a programme), and a Formal Competition.

The object of the first competition is to choose three architects, or architectural firms, who may compete in a second and Final Competition.

Only those who have competed in the Informal Competition will be invited to compete in the Final Competition.

RIGHT TO REJECT.

The committee reserves the right to reject any or all sketches or drawings submitted.

Committee also reserves right to consider experience and general ability for design, detail and construction in executing the building.

AWARDS.

There will be no financial compensation in the first competition, but the architects chosen by the undersigned committee to compete again will receive $500.00 each for their work on the second competition. The $500.00 paid to the successful competitor to be considered as payment on account of his commission.

The architect receiving the first place in the second competition will be appointed to execute the building, and be paid for his services according to the rate established by the American Institute of Architects.

DRAWINGS SENT.

Drawings must be sent by express to Mrs. William Lindsay, D. A. R., Care Mr. Charles J. Bell, President American Security and Trust Company, Washington, D. C. None will be received in Washington later than January 25th, 1903.

JUDGES.

The first competition will be decided by the Committee on Architecture, subject to the approval of the Congress of the Society, and with the advice of an expert.

DRAWINGS UNSIGNED.

Drawings shall be unsigned, and all assumed names, devices or insignia of any description shall be omitted.

Enclosed with each set of drawings shall be a sealed envelope, containing the name of the competitor.

When the drawings are unpacked, a member of the committee will number each set of drawings; corresponding numbers will be placed on the sealed envelope containing name of competitor. These envelopes will not be opened by the jurors until after they have rendered their decision.

DRAWINGS RETURNED.

Drawings will be returned to competitors at their expense within ten days from the date of judgment.

QUESTIONS.

Any questions relative to this programme which may be raised by the competitors, may be addressed in writing to Mrs. William Lindsay, Chairman of the Committee on Architecture, D. A. R , The Osborne, 205 West 57th Street, New York City; provided these questions are submitted two weeks before close of competition.

SITE.

The property owned by the Society and upon which the building is to be erected, faces a public square; the lot is 210 feet, 9 inches, fronting on Seventeenth Street; and 161 feet, 11 inches, on C Street; and 170 feet, 10⅝ inches, on D Street. Slope of lot, North to South, fall of 4 feet, 4 inches. Elevation 14 6-10 to 19 feet above tide water. Map will be furnished to competing architects.

CHARACTER OF THE BUILDING.

It is intended that this building shall be a monument to the heroic men and women of the Revolution, as well as an administrative building for the Society, and the treatment of the design should be in keeping with this idea.

The style of architecture to be classic.

While stone is to be preferred as building material, the design should not be excessive in cost.

REQUIREMENTS.

As the space is limited, the committee does not deem it necessary in this programme for the preliminary competition, to definitely state the exact seating capacity of the Auditorium, said capacity, however, not to exceed 2,000. The Auditorium to be the main feature of the building.

Thirteen columns symbolic of the thirteen original Colonies shall also be a feature of the building.

Rooms must be provided of sufficient size for the following officers, and for the purposes designated below:

President General and one clerk.

Vice-President General in charge of Organization of Chapters and three clerks.

Recording Secretary General and three clerks.

Corresponding Secretary General and one clerk.

Registrar General and four clerks.

Treasurer General and four clerks (this room to include a steel-lined vault).

Historian General and two clerks.

Editor and Business Manager of Magazine.

A Board Room to seat eighty.

A Museum for Revolutionary relics and pictures.

A Library.

Several Committee Rooms to accommodate from five to fifty members.

A Room for Curator.

The top floor for Dining and Kitchen purposes.

Arrangements shall be made for Heating, Ventilating and Lighting Plants, Cloak Rooms, Room for Janitor, Store Rooms, Elevators, Lavatories, etc.

The following drawings will be required in this Preliminary Competition:

A basement, first, second and third floor plan, and one section and two elevations, one of side facade, and one of front facade, at eighth scale, and a perspective sketch at eighth scale.

These drawings are to be made on Whatmann's paper, or white paper equally durable, with no landscape or other accessories except in the perspective sketch; all to be in black and white and to be submitted unmounted in pasteboard portfolios.

Finally, no other drawings than those required will be allowed and the committee will throw out of competition the drawings of any competitor who disregards the conditions in this programme.

(Mrs. William) Eleanor Holmes Lindsay, Chairman.

(Mrs. John W.) Mary Parke Foster.
(Mrs. Caleb) Elizabeth Clarke Churchman.
(Mrs. George M.) Martha L. Sternberg.
(Miss) Ella Loraine Dorsey.
(Mrs. S. V.) Eliza M. Chandler White.
(Mrs. J. Heron) Ellen Hall Crosman.
(Mrs. deB. Randolph) Jane Sumner Owen Keim.
(Mrs. A. G.) Mary Chase Mills.
(Miss) Mary Desha.
(Mrs. J. R.) Rachel H. L. Mellon.
(Mrs. R. S.) Georgia Stockton Hatcher.
(Mrs. Matthew T.) Julia G. Scott.
(Mrs. Charles H.) Frances A. M. Terry.
(Mrs.) Mary S. Lockwood.
(Mrs. Joseph D.) Althea Randolph Bedle.
(Miss) Eliza Titus Ward.

Committee on Architecture, a Sub-Committee of Continental Hall Committee, N. S. D. A. R.

STEPS TO TERRACE, COUNTRY HOUSE, GIRAUD FOSTER, LENOX, MASS. Carrere & Hastings, Architects. Marr, Photo, Aug., 1902.

know by recent discoveries, transport huge monoliths to great heights, and move them hundreds of miles; they could throw across rapid currents and wide rivers temporary bridges of marvelous ingenuity; and they could conceive and design buildings that have been the wonder of succeeding ages. All this they accomplished with a knowledge of practical mechanics that is marvelous. What, then, is the great success we have achieved in the mechanical arts? We shall find that our progress has been one of making fresh applications. That the ancients knew the five mechanical powers, and were able to apply them with consummate skill we have now clear evidence from tomb inscriptions and recent excavations. It was the practical side of mechanics, of hydraulics and other sciences, that first received attention, and though these were more limited they were applied most efficiently to the practical requirements of architecture and engineering. Afterwards, the theoretical principles became the subject of study, and to some extent obscured the practical issues. To our day it has been reserved to discover all the practical applications of science; hence our buildings and the operations connected with them exhibit a multiplicity of contrivance unknown to our ancestors. Most of these are new applications of old methods. To take, for example, our modern lifting machinery: The crane as we use it is an improved application of the wheel and axle through the intervention of sheaves, and the Armstrong crane is one form of the hydraulic crane, where the motion of the piston is multiplied by the chain which passes over blocks. Our builders highly appreciate the value of this appliance when fitted up high above the buildings upon lofty tripods for lifting huge blocks of stone and ironwork, and placing them in position. The ancients knew the lever and used it, and we can trace it back as far as the time of Menes, the first recorded Egyptian king, who lived four thousand, four hundred years before the Christian era; now we have many applications of the same mechanical power, such as the weigh-bridge, which consists of three levers, several forms of laboratory instruments for testing materials; then the builder of to-day can use many appliances which depend on water pressure. He can not only work cranes and hoists, but forging and welding machines, punching, stamping, and riveting machines. Thus a riveter with a short ram of eight inches diameter, can accomplish a vast amount of work; when used with accumulator and pumps, it can exert a pressure of one thousand, four hundred pounds per square inch. Again, by the same power, work of great mass and weight does not require to be brought to a machine; but a compact little appliance of three or four hundred weight, can be brought to the work—say a huge girder at a considerable height above the ground—which will punch the holes and finish the riveting. Thus instead of huge beams and cog-wheels, hydraulic power through a small flexible pipe will do the work much more simply. In this connection we may recall the many useful applications to building of

water-pressure, as that used for warehouse and hotel hoists, where a small-pressure cylinder with its ram in the basement can be made, by a block with sheaves, to raise or lower a cage or hoist. The most perfect lifts—as the hydraulic balance lift—are the results of this power, where the vertical ram, actuated by low or high pressure, is always in compression supporting the load or cage, and where the pressure of water can be regulated to suit the load instead of balancing the dead weight of ram and cage by a weight at the side. The hydraulic lift in its improved form is a good example of how the old mechanical and balanced lift has been superseded. These are a few instances of modern applications of old mechanical and hydraulic powers to building of the present day.

Modern ingenuity has done much more in making our buildings comfortable, in making their sanitary arrangements perfect, and in these directions it may be said truly that we have surpassed the dreams of ancient builders. Mechanically, our improvements have not gone so far as to show any great advances. Our modern buildings cannot be said to exhibit any great mechanical progress in constructural excellence over those of the Romans and Mediæval ages. Our vaulted structures are not more perfect as examples of skillful equipoise notwithstanding our inventions; our great bridges and roof-trusses show the one advance we have made in the employment of iron and steel, though we cannot affirm they show any progress in building construction. The greatest achievements in mechanical science are shown in engineering. But when we come to sanitary science, our progress has been more decided. In this sphere we seem to have surpassed the ancient builders in some directions. We have no evidence of their sanitary and hygienic arrangements, except those furnished by the Roman thermæ or baths. The system of heating by hypocausts has been described by Vitruvius and others. He describes hypocausts or hollow floors used for heating the hot rooms (*calidaria*). There were tubes of jointed clay pipe from the hypocaust through which heated air and smoke circulated between floors and escaped by a flue in the wall filled up with concrete. One method of heating was used during the late Empire. This was by lining the wall surface of bath-room with vertical lines of hot-air flue-pipes of rectangular section from the hot chamber, which had their escape above the roof. The recesses of the *calidaria* in the Baths of Caracalla were occupied by hot baths, made by such a hot-air jacket of flues. Then we know what the great arched cloacæ of Rome were, which drained every street of the city. These were marvelous constructions, prototypes of our modern arrangements. But when we come to the dwelling-house, we may assert that at no previous epoch have sanitary arrangements and applications been so perfect as they are to-day. We do not stop at public or municipal uses, but our sanitation has been applied to the smallest dwelling. It affects the individual citizen as well as the community. We have only to look over the sanitary manual or the trade catalogue of appliances of the sanitary manufacturer or plumber, where we shall find numberless inventions and fittings adapted with great ingenuity to closets, baths, lavatories, sinks, hot and cold-water apparatus, ventilating appliances, to every requirement of house drainage and water supply. These are mainly new applications of old principles, the results of experiment and a more thorough knowledge of the laws of fluids and gases, of the laws of pneumatics and heat. Practical chemistry and bacteriological researches have enabled us to adopt methods of sewage purification, and of storage and filtration that our forefathers were quite ignorant of. Chemical analysis has completely changed our modes of dealing with sewage and effluents; we have sterilization by heat, chemicals, and electricity. Electricity has been applied in various forms to building, in the form of motors for driving machinery, for electric lighting, for bells, etc., and we cannot set any limit to its further development.

Inventive genius has called out numerous applications in the form of materials for building to which it is needless to refer. The manufacturer does the architect's work, a contradiction to the conception of architecture to begin with. In the old craftmanship days every material was submitted to the architect, and was fashioned by his directing mind. It was designed directly for the building, and with special reference to it, and was never intended to be placed in any other position. But in many kinds of decoration in the market, made of embossed materials and in those materials that are cast or moulded, the old principle is contravened. The same design is applied to a variety of different situations that have no conditions in common. Several very valuable new materials have been introduced during recent years, or rather new applications of natural substances, mineral and other, that have rendered the architect's labors much less difficult, and have introduced methods of accomplishing various important objects in building.

The introductions in the shape of fittings and hardware are too numerous to mention. The ancient builder had to design and get forged his own hinges or door-fastenings; now the architect has only to specify or order his patterns from the ironmonger or smith. The supply is unlimited. But what are the conclusions to be drawn from the supply of ready-made manufactured articles? Have these modern facilities really helped us in our art? Have they been an unmixed blessing or otherwise? One of the points coming into notice is that the old designer or craftsman impressed every requirement and material with his own individuality; everything bore the impress of his mind. It is far otherwise in these days; the manufacturer, as we have said, designs and manufacturers. The old designs show a directness which the modern do not. The architect and art craftsman went, as it were, direct to Nature for their inspiration; each work passed through the alembic of the mind of the artist from its conception to its execution; the old architect saw his design carried out. Now we have lost a great deal of this directness of aim. The architect's design goes through many hands. The designer delegates his work to the workman, or to several factory hands, before it comes out finished; the architect also leaves his details to draughtsmen, and these in turn are handed to the builder and foreman before they are executed, so that often one sees the original design terribly modified or travestied. Again, this transference of the artist's work has made the architect more independent and indifferent, and there is a danger of his lapsing into a mere professional agent for other people's work. He delegates his work to engineers, large firms of masons, sculptors and carvers, smiths, metal-workers, keramic manufacturers, and decorators, and the result is often very much mixed, confused, and inharmonious. Our buildings are apt to suffer in integrity and union of character for another reason.
